



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/713,121	11/15/2000	William D. Nations	PA-Y0014	3359

7590 01/03/2002

Joyce Kosinski  
Patent Administrator  
Loral Space and Communications  
655 Deep Valley Drive Suite 303  
Rolling Hills Estates, CA 90274

EXAMINER

GREEN, MIGUEL D

ART UNIT

PAPER NUMBER

2681

DATE MAILED: 01/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/713,121

Applicant(s)

NATIONS ET AL.

Examiner

Miguel D. Green

Art Unit

2681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "30" (p.12 line 19) and "130" (Fig.3) have both been used to designate the source of internet information. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 101-109, 201-211, 301-311, 401-409, 501-506, 601 and 602 all in Fig.2. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. Alternatively, the aforementioned reference signs may simply be omitted from the Fig.2 drawing, since reference number 41 sufficiently addresses the spot beams as stated in the specification (p.8 line 17). The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

3. Claim 22 is objected to because of the following informalities: in order for "the related information" to have antecedent basis, and for the purpose of examination, it is assumed that this claim depends on claim 21 and does not depend on claim 17 as stated. Appropriate correction is required.

Art Unit: 2681

4. Claim 26 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 25 already states "at least one user terminal...and that comprises a cache for caching..." (lines 6-7).

*Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-8, 10-13, 16, 17, 19-21, 23, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Adiwoso et al (US Pat. No. 5,963,862).

Regarding claim 1, Adiwoso et al teaches a data transmission system comprising: a two-way communication link (25) comprising at least one satellite (12); at least one user terminal (26-29) having two-way communication with the two-way communication link; and at least one gateway (30) having access to data and having two-way communication with the two-way communication link; note Fig. 1.

Regarding claims 2-8, Adiwoso et al teaches the system recited in claim 1, further wherein the two-way communication link comprises low and high bandwidth two-way communication link (note col.5 line 54 – col.6 line 3), and admits that the communication link comprises Ka-band and Ku-band frequencies utilized in two-way data transmission satellite

Art Unit: 2681

systems given certain conditions (namely, when rain fade is not factored-in; note col.6 lines 58-67). Adiwoso et al furthermore discloses a plurality of spot beams and wide coverage area broadcasting, whereby information requested may be received by multiple user terminals (note Fig.2 and col.6 lines 5-48).

Regarding claim 10, Adiwoso et al teaches the system recited in claim 1, and further wherein the at least one gateway comprises a subscriber database that stores user information that reads on a cache (note col.4 lines 50-52).

Regarding claim 11, Adiwoso et al teaches a method of communication data inherent in the disclosed design of a data transmission system, the method comprising the steps of: providing one or more orbiting satellites that comprise a two-way communication link; providing at least one user terminal having two-way communication with the two-way communication link; providing at least one gateway having access to data and having two-way communication with the two-way communication link; generating requests for data at the at least one user terminal; transmitting the requests for data from the at least one user terminal by way of the two-way communication link to the at least one gateway; obtaining the requested data at the at least one gateway; and transmitting the requested data from the at least one gateway to the at least one user terminal by way of the two-way communication link. Note Fig.1 and col.5 line 54 – col.6 line 3.

Regarding claims 12 and 13, Adiwoso et al teaches the above in re claim 11, and furthermore, wherein the step of transmitting the requests for data comprises transmitting the requests for data by way of a low bandwidth communication link that is via satellite, or in other words, wireless. Note Fig.1 and col.5 line 54 – col.6 line 3.

Art Unit: 2681

Regarding claims 16, 17, 23 and 24, Adiwoso et al teaches the above in re claim 11, and furthermore, teaches a dynamic allocation process that reads on transmitting the data by way of a low or high bandwidth communication link, in that even though the NCC can allocate a large information transfer bandwidth to the forward link (col.5 lines 64-66), the inherent nature of on-demand service dictates that requested data may or may not need a lot of bandwidth in broadcast to the user, and thus bandwidth will be allocated accordingly, given dynamic allocation (e.g., demand for an email message versus streaming video). Note col.5 line 54 – col.6 line 3. Furthermore, the teaching of Adiwoso et al generally reads on real-time information broadcasts and transmission of most-requested web pages.

Regarding claims 19 and 20, Adiwoso et al teaches the above in re claim 11, and furthermore wherein the step of obtaining the requested data at the at least one gateway inherently comprises using a user's request history and user profile to obtain the requested information, as per the subscriber database that stores user information (note col.4 lines 50-55).

Regarding claim 21, Adiwoso et al teaches the above in re claim 11, and furthermore, signaling information which the gateway extracts from and inserts into the data transmission, which reads on obtaining data related to the requested data (actual call, also obtained by gateway to be routed to user terminal), and transmitting both the requested and related data to the user terminal (note col.10 lines 50-58).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2681

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adiwoso et al (US Pat. No. 5,963,862) in view of well-known prior art (MPEP 2144.03).

Regarding claims 9 and 18, Adiwoso et al teaches the data transmission system as in re claim 1, including two-way data communication user terminals being a multimedia device such as a computer (note col.5 lines 33-36). Adiwoso et al fails to specifically teach said user terminal (i.e., computer) comprises a cache. However, the examiner takes Official Notice that it is notoriously well-known in the art for a data communication terminal, in this case a standard computer, to comprise a cache and memory of that kind. It would have been obvious to one of ordinary skill in the art at the time of the invention for the terminal(s) taught by Adiwoso et al to further comprise a cache, so that standard data communications equipment can be used in implementing the transmission system which allows for lower cost. The method of caching at the user terminal is furthermore inherent to the design comprising the cache.

7. Claims 14, 15, 22 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adiwoso et al (US Pat. No. 5,963,862) in view of Cunningham et al (US Pat. No. 5,991,596).

Regarding claims 14 and 15, Adiwoso et al teaches the data transmission system as in re claim 12, including low bandwidth data communication links, but fails to disclose these links as possibly being wireless or terrestrial. However, Cunningham et al discloses in an information broadcast, data transmission system with an inherent method comprising a backhaul channel that

Art Unit: 2681

provides a wireless and terrestrial communication link (note col.1 line 36 – col.2 line 49). It would have been obvious to one of ordinary skill in the art at the time of the invention for the system and method of Adiwoso et al to further involve a wireless and terrestrial link as taught by Cunningham et al, so that an alternate means of communication is possible to circumvent "busy periods" of conventional satellite links.

Regarding claim 22, in light of the above claim objection, Adiwoso et al teaches the data transmission request method as in re claim 21, and further the step of storing related user information at the gateway as per the subscriber database that stores user information (note col.10 lines 50-58). Adiwoso et al fails to specifically disclose storing the requested information at the gateway. However, the system and method of Adiwoso et al combined (as above) with Cunningham et al comprises a ground terminal (in Cunningham et al: Fig.2 item 18 and col.4 lines 20-42) that reads on a gateway storing requested information, i.e., message timing and short delays in throughput inherent in backhaul system design (in Cunningham et al: col.5 lines 9-19).

Regarding claims 25 and 26, the system and method of Adiwoso et al combined (as above) with Cunningham et al teaches data transmission system comprising: a terrestrial communication link for communicating requests for data (i.e., backhaul channel as per Cunningham et al); a satellite broadcast link for transmitting the requested data; at least one gateway having access to data that communicates with the terrestrial communication link and the satellite broadcast link; and at least one user terminal that communicates with the terrestrial communication link and the satellite broadcast link and that comprises a cache for caching the requested data broadcast by the satellite broadcast link (note user terminal caching in re claims 9 and 18). Note Figs.1&2 and col.3 lines 23-34 of Cunningham et al, and Fig.1 of Adiwoso et al.



Art Unit: 2681

Regarding claims 27, the system and method of Adiwoso et al combined (as above) with Cunningham et al teaches data transmission system further wherein a gateway comprises a cache (note in re claim 22).

Regarding claim 28, the system and method of Adiwoso et al combined (as above) with Cunningham et al teaches data transmission system further comprising a terrestrial link for transmitting the requested data to the at least one user terminal in the event that the satellite broadcast link becomes inoperative (in Cunningham et al: col.1 line 58 – col.2 line 7).

### ***Prior Art of Record***

The following is prior art made of record and not relied upon but considered pertinent to applicant's disclosure:

Brewer (US Pat. No. 6,208,626) discloses a real-time satellite communications system providing high bandwidth information resources.

Wilson (US Pat. No. 6,160,993) discloses a method and apparatus for command signals in a direct-to-home subscription information system that involves Internet access among its subscribed-to services.

Rosati (US Pat. No. 6,041,233) generally discloses two-way, low and high bandwidth, satellite-based communications service.

Weinberg et al (US Pat. No. 6,020,845) discloses a satellite communication system comprising a high data rate Ku-Ka band broadcast channel, and low data rate S-band information request channel.

Art Unit: 2681

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Miguel D. Green whose telephone number is 703-308-6729. The examiner can normally be reached on Mon-Fri (9am - 5pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne D. Bost can be reached on 703-305-4778. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer service personnel whose telephone number is 703-306-0377.



MDG

December 31, 2001



**QUOCHIEN VUONG  
PATENT EXAMINER**